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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,027	08/31/2001	Venkateswar R. Kowkutla	TI-31681	1605

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EXAMINER

NGUYEN, LINH V

ART UNIT PAPER NUMBER

2819

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/945,027

Applicant(s)

KOWKUTLA ET AL.

Examiner

Linh V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 5 - 16, and 19 - 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 17, 18 and 24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/31/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 – 4, drawn to noise shaper, classified in class 330, subclass 251.
 - II. Claims 5 – 9, drawn to clock modulator, classified in class 330, subclass 10.
 - III. Claims 10, 21 and 22, drawn to h-bridge, classified in class 330, subclass 146.
 - IV. Claims 11 - 16, drawn to timing control, classified in class 330, subclass 52.
 - V. Claims 19, and 20 drawn to power supply, classified in class 330, subclass 297.
 - VI. Claim 23 drawn to protection means, classified in class 330, subclass 298.
2. Group 1 has elected from applicant with traverse in response to Paper No. 4 on 4/24/03.

Response to Arguments

3. Applicant's election with traverse of restriction in Paper No. 4 is acknowledged. The traversal is on the ground(s) that examination of 24 claims of application can be made without serious burden. This is not found persuasive because inventions Group I, II, III, IV, V, and VI, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. Therefore different search is required for each subcombination,

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which creates a burden for examination. The requirement is still deemed proper and is therefore made FINAL.

4. Claims 1 – 4, 17, 18 and 24 are examining on this office action in response to applicant election on 4/24/03.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 17, 18 and 24, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. These claims are omnibus type claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 – 4, rejected under 35 U.S.C. 102(b) as being anticipated by Komamura U.S. patent No. 5,497,154.

Regarding to claim 1, Figures 11, and 14, Komamura disclose a circuit device including a noise shaper (Fig. 11) and a dither generator (100) arranged to introduce

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noise to the shaper (output of 100), said generator using a seed value derived from a state variable of said shaper (input of 100).

Regarding to claim 2. A wherein the number of bits (M bits) in the generated noise exceeds that of the seed value (Least significant bit, see Fig. 7).

Regarding to claim 3. A digital amplifier as claimed in claim 1 or claim 2 and wherein the dither generator includes shift registers of predetermined bit lengths to receive said seed values and provides a noise output (Fig. 7, Col. 6 lines 1 – 6).

Regarding to claim 4. A digital amplifier as claimed in any preceding claim including means (Fig. 11, 14) for scaling said noise.

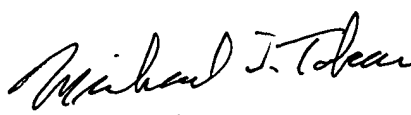
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (703) 305-1934. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Tokar can be reached at (703) 305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

LVN

June 2, 2003


Michael Tokar
Supervisory Patent Examiner
Technology Center 2800